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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,284	12/20/2000	Shoou-I Wang	06068 USA	6496

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AIR PRODUCTS AND CHEMICALS, INC.  
PATENT DEPARTMENT  
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EXAMINER

CLARKE, SARA SACHIE

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/741,284

Applicant(s)

WANG ET AL.

Examiner

Sara Clarke

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21 and 27-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Decaux et al. (CH 506609).

Decaux et al. discloses the invention as claimed including a plurality of adjacent burners 21. Burners 21 are elongated at least as they extend outwardly from the furnace shell. The section above the topmost burners 21 is the second interior region.

Claims 21, 22, 27, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Straitz, III (US 4092095).

Straitz, III discloses the invention as claimed including a plurality of adjacent burner units (see Figs. 1 and 2), a common fuel supply 40, a common air supply 35, means 42 for regulating a flow of fuel to each burner unit from said common fuel supply, and means 37,38 for regulating a flow of air to each burner unit from said common air supply. As per applicant's specification, the means for regulating a flow of fuel is a valve 52 and the means for regulating a flow of air are dampers 44.

Claims 21, 23, 27, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Welden (US 4614491).

Welden discloses the invention as claimed including a plurality of adjacent burners. See Fig. 3. The burners are equally spaced apart and can be fired at different firing rates. See column 2, lines 50 and 51.

Claims 21, 23-25, 27-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Dutkiewicz (US 3677234).

Dutkiewicz discloses the invention as claimed including adjacent burner units variably spaced. See Figs 1 and 2 and the first full paragraph of column 3. Burners 36 are elongated at least as they extend outwardly from the furnace shell. The section to the right of the rightmost burners 36 is the second interior region. While Dutkiewicz discloses cocurrent flow of the flue gases and the fluid in pipe 30, the pipe is capable of carrying fluids in both directions and this meets this functional claim limitation.

All of claims 23-25 recite the intended use of the claimed structure of these claims. It has been held that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (BPAI 1987) Since Dutkiewicz discloses all of the claimed structure, Dutkiewicz anticipates the claims. Moreover, since Dutkiewicz discloses each of the burners having valves 40, the device of Dutkiewicz necessarily can provide the functions of either providing the same firing rates or differing firing rates.

Claims 21 and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Herder (US 4252300).

Herder discloses the invention as claimed including a plurality of adjacent burners units (see Figs. 1 and 2) and at least one burner unit 30-1 combusts at least one first fuel or fuel mixture containing the first fuel (gas) and at least one other burner unit 30-2 combusts at least one second fuel (oil) or a fuel mixture containing a second fuel.

Regarding the functional language of claim 21, since all of the references listed above disclose the claimed structure of claim 21 (i.e., the plurality of adjacent burners), they anticipate claim 21. Moreover, since all of the references listed above disclose the structure or structures, which applicant discloses as providing the function, e.g., the variably spaced burners or different burners burning different fuels, the structures disclosed by these references necessarily provide the claimed functions.

### ***Response to Arguments***

Applicants argue that the examiner did not account for certain limitations (i.e., "variable heat flux" in the preamble, page 20, of applicant's response dated 12/13/2004) and "incorrectly dismissing" functional language in the claims (page 20 of applicant's response).

To support applicants' position that "variable heat flux" in the preamble must be construed as a structural limitation, applicant relies on, Poly-America v. GSE Lining Technology, 72 USPQ2d 1685, 1689 (Fed. Cir. 2004) and Karsten Mfg. v. Cleveland Golf, 58 USPQ2d 1286, 1288 (Fed. Cir. 2001). It is noted that both of these cases are infringement cases. Applicants are reminded that during examination, the USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation. This

means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

Firstly, it is noted that "variable heat flux" is a statement of intended use in that it describes how the system operates. Moreover, the body of the claim completely defines the invention by reciting a plurality of adjacent burner unites. Thus, relying on Kropa v. Robie, 88 USPQ 478, 481 (CCPA 1951), since the body of the claim completely defines the subject matter and the preamble merely states a purpose or intended use, the preamble, and more specifically "variable heat flux" is denied the effect of a limitation.

Assuming arguendo it is argued that "variable heat flux" is given the effect of a limitation, it is noted that the various references applied are capable of performing this function. This response also applies to new claims 27-32. All of the references can perform the function of providing a variable heat flux because they all disclose a plurality of adjacent burners. This plurality of adjacent burners is capable of providing a variable heat flux as per Figs. 22 and 23 of applicant's disclosure.

Applicants argue on page 23 of the response that the cited references are not enabling with respect to applicants' claimed invention. When the reference relied on expressly anticipates or makes obvious all of the elements of the claimed invention, the reference is presumed to be operable. Once such a reference is found, the burden is on applicant to provide facts rebutting the presumption of operability. In re Sasse, 629 207 USPQ 107 (CCPA 1980). Applicants have provided no evidence to back their conclusory statements the references are not enabling.

On pages 23 and 24 of the response, Applicants argue that the functional language in the body of the claim must be recognized as a position limitation and cannot be simply ignored. However, the examiner notes that she did not make a rejection against the claims and more specifically against the functional limitations under 35 U.S.C. 112, 2<sup>nd</sup> paragraph. Instead this language has been accorded the appropriate weight as per MPEP 2112.01. Applicants' repeated attempts to ascribe greater weight to these limitations is not well taken.

With respect to Decaux et al., Straitz, III, Welden, and Herder, on pages 25-32 of the response, applicant has not made arguments beyond the arguments made on pages 17-25. Accordingly, the examiner has not addressed these arguments specifically.

With respect to Dutkiewicz on pages 29-31, applicants argue that the limitations preceded by the word "wherein" do not indicated "intended uses" which are not structurally limiting. The examiner understood that "equally spaced apart" (claim 23) and "variably spaced apart" (claim 24) are structural limitations. Equally spaced apart burners are shown in Figs. 1 and 2 by the ten leftmost burners 36. Variably spaced apart burners are the two rightmost burners as compared with the ten leftmost burners. However, with respect to claim 25, it is noted that the fuel being combusted at different firing rates by each burner is a functional limitation. The burners 36 of the reference are capable of performing the function at least due to values.

Finally, it is noted that most of applicants' arguments are based on functional language in the claims. Instead of providing evidence or at least reasoning as to why the references cannot function as claimed, applicant argues only that the examiner

simply ignored the limitations. Yet again applicants are directed to MPEP sections 2111, 2112, and 2114.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


### ***Contact Information***

Any inquiry concerning this or earlier communications from the examiner should be directed to Sara Clarke whose phone number is 571-272-4873. The examiner normally can be reached Mon-Fri, 8:30-1:00.

If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached at 571-272-4877. The fax number for the organization where this application is assigned is 703-872-9306.



Status information for an application is available from the Patent Application Information Retrieval (PAIR) system. Status information for published applications is available from Private or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR, see <http://pair-direct.uspto.gov>. For questions on access to Private PAIR, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sara Clarke   
Primary Examiner  
Art Unit 3749

March 7, 2005